## **CHAPTER 70**

## **DEFINITIONS**

Sec.

7099.1 Definitions

## 7099 **DEFINITIONS**

7099.1 When used in this subtitle, the following terms and phrases shall have the meanings ascribed:

**Aboveground release** - any release to the surface of the land or to surface water. This includes, but is not limited to, releases from the aboveground portion of an UST system and releases associated with overfills and transfer operations as a regulated substance moves to or from an UST system.

**Accidental release** - any sudden or non-sudden release of petroleum or other substance from an underground storage tank that was neither expected nor intended by the tank owner or operator, and which results in the need for corrective action or compensation for bodily injury or property damage.

**Act** – the District of Columbia Underground Storage Tank Management Act of 1990, as amended, D.C. Law 8-242; D.C. Code §6-995.1 *et seq.* (1995 Repl. Vol.).

**Active remediation** — actions taken to reduce the concentrations of chemical(s) of concern. Monitored natural attenuation, non-pressurized subsurface venting or any other technology involving limited activities as determined by the Director, are not active remediation.

**Ancillary equipment** - any device including, but not limited to, piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of regulated substances to and from an underground storage tank.

**Attenuation** — the reduction in concentrations of chemical(s) of concern in the environment with distance and time due to processes such as diffusion, dispersion, absorption, chemical degradation, biodegradation, and so forth.

**Belowground release** - any release to the subsurface of the land or to groundwater. This includes, but is not limited to, releases from the below ground portion of any UST system and belowground releases associated with overfills and transfer operations as a regulated substance moves to or from an UST.

**Beneath the surface of the ground** - any item or area actually located beneath the ground surface or that is covered with earthen materials.

**Bodily injury** - has the meaning currently applicable under the law of the District of Columbia. However, the term is not intended to include those liabilities which, consistent with standard insurance industry practices applicable to the District of Columbia, are excluded from coverage in liability insurance policies for bodily injury.

**Cannot be located** – shall mean the failure to locate an owner or operator of a tank after searching diligently for a period of six (6) months.

Case closure letter -- a letter issued for sites that have achieved Tier 0 or Tier 1 cleanup standards. A case closure letter may be referred to as a "site closure" letter. Issue of a case/site closure letter implies a "complete" remedy of the release and that liability has been addressed fully.

**Cathodic protection** - a technique for preventing corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current.

Cathodic protection tester - a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, a tester has education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.

**CERCLA** - the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

**Chemical(s) of concern** — specific constituents that are identified for evaluation in the risk assessment process.

Chemical release--any spill or leak or detection of concentrations of chemical(s) of concern in environmental media.

**Compatible** - the ability of two (2) or more substances to maintain the respective physical and chemical properties upon contact with one another for the design life of the underground tank system under conditions likely to be encountered in an UST system.

**Connected piping** - all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which a regulated substance flows. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two (2) UST systems is allocated equally between them.

**Consumptive use** - consumed on the premises, when describing heating oil use.

**Controlling interest** - the direct ownership by one (1) person or entity of at least fifty percent (50%) of the voting stock of another entity.

**Corrective action** — the sequence of actions that include site investigation, site assessment, interim remedial action, remedial action, operation and maintenance of equipment, monitoring of progress, and termination of the remedial action.

Corrosion expert - a person who, by reason of a thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired through a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. A corrosion expert is a person who has been accredited or certified as being qualified by the National Association of Corrosion Engineers or is a registered professional engineer with certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.

**Department** - the District of Columbia Department of Health.

**Dielectric material** - a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of an UST system (i.e., a tank from piping).

**Director** - the Director of the Department of Health or Director's designee or the Head of the Underground Storage Tank Division.

Earthen materials - earth, soil, ground, clay, gravel, sand, silt, rock, cement, concrete.

**Electrical equipment** - underground equipment that contains dielectric fluid that is necessary for the operation of equipment, such as transformers and buried electrical cable.

**Engineering controls** — modifications to a site or facility (for example, slurry walls, capping, and point of use water treatment) to reduce or eliminate the potential for exposure to chemical(s) of concern.

**Environmentally sensitive receptors** — wetlands, wildlife breeding and wintering areas for species of concern, habitats for endangered plant and animal species, and Federal and local parks. For purposes of the District of Columbia UST RBCA program, groundwater and surface waters shall be treated as receptors when preparing exposure or risk assessments.

**Excavation zone** - the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which an UST system is placed at the time of installation.

**Existing tank system** - a tank system used to contain an accumulation of a regulated substance or for which installation commenced on or before November 12, 1993. Installation is considered to have commenced if the owner or operator has obtained all federal and District of Columbia government approvals or permits necessary to begin physical construction of the site or installation of the tank system, and either of the following has occurred:

- (a) Either a continuous on-site physical construction or installation program has begun; or
- (b) The owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for physical construction at the site or installation of the tank system to be completed within a reasonable time.

**Exposure** — contact of an organism with chemical(s) of concern at the exchange boundaries (for example, skin, lungs, and liver) and available for absorption.

**Exposure Assessment** - An assessment to determine the extent of exposure of, or potential for exposure of, individuals to regulated substances from a release from an underground storage tank based on such factors as the nature and extent of the contamination and the existence of or potential for pathways of human exposure (including ground or surface water contamination, air emissions, and food chain contamination), the size of the community within the likely pathways of exposure, and the comparison of expected human exposure levels to the short-term and long-term health effects associated with identified contaminants and any available recommended exposure or tolerance limits for such contaminants.

**Exposure pathway** — the course a chemical(s) of concern takes from the source area(s) to an exposed organism. An exposure pathway describes a unique mechanism by which an individual or population is exposed to a chemical(s) of concern originating from a sit. Each exposure pathway includes a source or release from a source, a point of exposure, and an exposure route. If the exposure point differs from the source, a transport/exposure medium (for example, air) or media also is included.

**Exposure route** — the manner in which a chemical(s) of concern comes in contact with an organism (for example, ingestion, inhalation, and dermal contact).

**Facility** - In accordance with §2 of the District of Columbia Underground Storage Tank Management Act (the "Act"), one (1) or more underground storage tanks at a given location. For purposes of releases, "the property containing the source of the chemical(s) of concern where a release has occurred.

**Farm tank** - an UST located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank is actually located on farm property. For purposes of this definition, the term "farm" includes fish hatcheries, rangeland, and nurseries with growing operations.

**Financial reporting year** - the latest consecutive twelve (12) month period (either a fiscal or a calendar year) for which any of the following reports used to support a financial test is prepared:

- (a) An annual report of tangible net worth submitted to Dun & Bradstreet;
- (b) A 10-K report submitted to the Securities & Exchange Commission; or
- (c) Annual reports submitted to the Energy Information Administration or the Rural Electrification Administration.

**Fire Prevention Code** – the District of Columbia Fire Prevention Code Supplement of 1992, Title 12 DCMR, D.C. Construction Codes Supplement of 1992.

**Flow - through process tank -** a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

**Free product** - a regulated substance that is present as a non-aqueous phase liquid (liquid that is not dissolved in water).

**Gathering line** - any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations.

**Guarantor** - In accordance with §2 of the Act, any person, other than the owner, who provides evidence of financial responsibility for an underground storage tank or UST facility.

**Hazard index** — the sum of two or more hazard quotients for multiple chemical(s) of concern or multiple exposure pathways, or both.

**Hazard quotients** — the ratio of the level of exposure of chemical(s) of concern over a specified time period to a reference dose for that chemical(s) of concern derived for a similar exposure period.

**Hazardous substance UST system** - an underground storage tank system that is not a petroleum UST system, and which contains a hazardous substance defined in §101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (the "Superfund" Act), but not including any substance regulated as a hazardous waste under Subtitle C of the Resource Conservation and Recovery Act, or any mixture of those hazardous substances and petroleum.

**Heating oil** - petroleum that is No. 1, No. 2, No. 4 (light), No. 4 (heavy), No. 5 (light), No. 5 (heavy), and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for any of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

**Hydraulic lift tank** - a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate a lift, elevator, or other similar device.

**Initial response action**—the course of action to mitigate hazards to human health, safety and the environment, including immediate or short-term abatement or containment measures to prevent the spread of a release.

**Institutional controls** — the restriction on use or access (for example, fences, deed restrictions, restrictive zoning) to a site or facility to eliminate or minimize potential exposure to a chemical(s) of concern.

**Interim remedial action** — the course of action to mitigate fire and safety hazards and to prevent further migration of hydrocarbons in their vapor, dissolved, or liquid phase.

**Legal defense cost** - any expense that an owner or operator or provider of financial assurance incurs in defending against claims or actions brought by or on behalf of any of the following:

- (a) The U.S. Environmental Protection Agency, the District of Columbia, or a state to require corrective action or to recover the costs of corrective action;
- (b) A third party for bodily injury or property damage caused by an accidental release; or
- (c) Any person to enforce the terms of a financial assurance mechanism.

**Liquid trap** - a sump, well cellar, or other trap used in association with oil and gas production, gathering, and extraction operations (including gas production plants) for the purpose of collecting oil, water, and other liquids. For example, liquid traps are used to temporarily collect liquids for subsequent disposition or re-injection into a production or pipeline stream, and are used to collect and separate liquids from a gas stream.

**Maintenance** - the normal operational upkeep to prevent an underground storage tank system from releasing a regulated substance.

**Motor fuel** - petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of gasohol, and is typically used in the operation of a motor engine.

**Natural attenuation**—the reduction in the concentration(s) of chemicals of concern in environmental media due to naturally occurring physical, chemical, and biological processes (for example, diffusion, dispersion, adsorption, chemical degradation, and biodegradation).

**Neighboring property** --- any property outside the boundaries of the real property on which the facility is located.

**New tank system** - an UST system that will be used to contain an accumulation of regulated substances and for which installation commenced after the effective date of these regulations.

No further action (NFA) letter – a letter issued for sites that have accomplished only the Tier 2 site-specific cleanup goals or voluntary remediation sites for which only limited corrective actions, less than complete cleanup, were undertaken and performed by the remediation party. Issue of a no-further-action letter implies that steps necessary to stabilize and alleviate the effects of a release have been taken, but that a complete remedy either was not achieved or not undertaken and future use of the site may be restricted.

**Non-aqueous phase liquids (NAPL)** -- chemicals that are insoluble or only slightly soluble in water that exist on or below the water table.

**Non-commercial purposes** - motor fuel that is not possessed or stored for the purpose of resale.

**Occurrence** - an accident, including continuous or repeated exposure to conditions which results in a release from an underground storage tank. The definition set forth in this paragraph is not intended either to limit the meaning of "occurrence" in a way that conflicts with standard insurance usage or to prevent the use of other standard insurance terms in place of the term "occurrence."

On the premises where stored - with respect to heating oil, an UST system located on the same property where the stored heating oil is used.

**Operational life** - the period beginning when installation of an UST system has commenced until the time the tank system is properly closed in accordance with the provisions of Chapter 61.

**Operator** - In accordance with §2 of the Act, any person in control of, or having responsibility for, the daily operation of an UST system.

**Overfill release** - a release of a regulated substance that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment.

Owner - In accordance with §2 of the Act, either of the following:

- (a) In the case of any UST system in use on November 8, 1984, or brought into use after that date, any person who owns an UST system used for storage, use, or dispensing of regulated substances; and
- (b) In the case of any UST system in use before November 8, 1984, but no longer in use on that date, any person who owned the UST immediately before the discontinuation of its use.

**Person** - In accordance with §2 of the Act, the term "person" includes an individual, partnership, corporation, government corporation, trust, firm, joint stock company, association, consortium, joint venture, a commercial entity, state, municipality, commission, political subdivision of a state, the District of Columbia, the United States Government, a foreign government, or any interstate body.

**Person-in-charge** – an owner or person designated by the owner, an operator, or permittee as the one with direct supervisory responsibility for an activity or operation at a facility, such as the transfer of a regulated substance to or from any point in the facility.

**Petitioner** - anyone who files a petition including the Director or District Government.

**Petroleum** - In accordance with §2 of the Act, the term "petroleum" includes crude oil or any fraction of crude oil that is liquid at standard conditions of temperature and pressure of sixty degrees Fahrenheit (60 F.) and fourteen and seven tenths pounds per square inch (14.7 lbs/in.²) absolute.

**Petroleum marketing facility** - a facility at which petroleum is produced or refined and any facility from which petroleum is sold or transferred to other petroleum marketers or to the public.

**Petroleum marketing firm** - a firm owning one (1) or more petroleum marketing facilities. A firm owning other types of facilities with underground storage tanks in addition to petroleum marketing facilities is considered to be a petroleum marketing firm.

**Petroleum UST system** - an underground storage tank system that contains petroleum or a mixture of petroleum with *de minimis* quantities of other regulated substances. Petroleum UST systems include those systems containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

**Pipe or piping** - a hollow cylinder or tubular conduit that is constructed of non-earthen materials.

**Pipeline facilities (including gathering lines)** - new and existing pipe rights-of-way and any associated equipment, facilities, or buildings.

**Point(s)** of compliance—a location(s) selected between the source area(s) and the potential point(s) of exposure where concentrations of chemical(s) of concern must be at or below the determined target levels in media (for example, ground water, soil, or air).

**Point(s) of exposure-**-the point(s) at which an individual or population may come in contact with a chemical(s) of concern originating from a site.

**Pressurized or under pressure** - where UST system piping regularly carries a regulated substance with a force behind the flow that is greater than the ambient atmospheric pressure at the UST system site.

**Program Manager** - Program Manager of the Underground Storage Tank Division of Department of Health or the Program Manager's designee.

**Property damage** - for purposes of this Subtitle, the term "property damage" has the meaning currently applicable to this term under the law of the District of Columbia. However, the term is not intended to include those liabilities which, consistent with standard insurance industry practices applicable to the District of Columbia, are excluded from coverage in liability insurance policies for property damage. However, exclusions for property damage shall not include corrective action associated with releases from tanks which are covered by the policy.

**Provider of financial assurance** - an entity that provides financial assurance to an owner or operator of an underground storage tank through one or more of the mechanisms set forth in this subtitle (§§6700 through 6715) including a guarantor, insurer, risk retention group, surety, issuer of a letter of credit, or other mechanism approved by the District of Columbia.

**Reasonably anticipated future use** — future use of a site or facility that can be predicted with a high degree of certainty given current use, local government planning, and zoning.

**Receptors** — persons, structures, utilities, surface waters, and water supply wells that are or may be adversely affected by a release.

**Regulated substance** - In accordance with §2 of the Act, the term "regulated substance" includes the following:

- (a) Hazardous substances, as defined in §101(14) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") of 1980, 42 USC §9601(14), but not including any substance regulated as a hazardous waste under subtitle C of the Resource, Conservation, and Recovery Act ("RCRA"), 42 USC §6901 *et seq.*;
- (b) Petroleum; and
- (c) Any petroleum-based substance comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading, and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

**Release** - in accordance with §2 of the Act, any spilling, leaking, emitting, discharging, escaping, leaching, or disposing from an underground storage tank or UST system. The term includes, but is not limited to, any "release" into ground water, surface water, or subsurface soils.

**Release detection** - a determination whether a release of a regulated substance has occurred from an UST system into the environment or into the interstitial space between an UST system and its secondary barrier or the secondary containment around an UST system.

**Remediation/remedial action** — any and all corrective actions taken to clean-up or to remediate a site which exceeds District of Columbia or federal standards for soil or water quality. Activities conducted to protect human health, safety, and the environment. These activities include evaluating risk, making no-further-action determinations, monitoring institutional controls, engineering controls, and designing and operating cleanup equipment.

**Repair** - to restore a tank or UST system component that has caused a release of product from the UST system.

**Residential tank** - a tank located on property used primarily for dwelling purposes.

**Respondent** – **any person** who is served with a notice of violation, or a proposed or immediate compliance or cease and desist order, or a notice of suspension, denial or revocation.

**Responsible party** - In accordance with §2 of the Act, the term "responsible party" means:

- (a) An owner or operator as defined in this chapter;
- (b) A person who caused or contributed to a release from an underground storage tank system;
- (c) A person who caused a release as a result of transfer of a regulated substance to or from an underground storage tank system;

- (d) A person found to be negligent, including any person who previously owned or operated an underground storage tank or facility, or who arranged for or agreed to the placement of an underground storage tank system by agreement or otherwise;
- (e) The owner of real property where an underground storage tank is or was located if the owner or operator of the tank as defined in this Chapter cannot be located or is insolvent, or
- (f) The owner of neighboring property where contamination from an underground storage tank is discovered if the real property owner refuses without good cause to permit the owner or operator of the tank access to the property to investigate or remediate the site.

**Risk assessment** — an analysis of the potential for adverse health effects caused by a chemical of concern from a site to determine the need for remedial action or the development of target levels where remedial action is required.

**Risk-based-corrective action (RBCA)** — a risk-based decision-making (RBDM) process designed to integrate risk and exposure assessment in response to petroleum releases; which uses a tiered approach to tailor corrective action activities to site specific conditions and risks, including exposure pathways, exposure routes, environmental receptors and allowable human health risk levels, to ensure that the chosen action is protective of human health and the environment.

**Risk-based screening level/screening levels (RBSLs)** — risk-based site-specific corrective action target levels for chemical(s) of concern developed under the Tier 1 evaluation.

**SARA** - the Superfund Amendments and Reauthorization Act of 1986.

**Septic tank** - a watertight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from the receptacle is distributed for disposal through the soil and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility.

**Site** — the area(s) defined by the extent of migration of the chemical(s) of concern.

**Site assessment** —an evaluation of subsurface geology, hydrology, and surface characteristics to determine if a release has occurred, the levels of the chemical(s) of concern, and the extent of the migration of the chemical(s) of concern. The site assessment collects data on ground water quality and potential receptors and generates information to support remedial action decisions.

**Site classification** — a qualitative evaluation of a site based on known or readily available information to identify the need for interim remedial actions and further information gathering. Site classification is intended to specifically prioritize sites considering the threat to human health and the environment.

**Site investigation** — initial testing at the site to confirm the existence of a release by sampling the soil and water around the UST system for the presence of contaminants.

**Site-specific** — activities, information, and data unique to a particular site.

**Site-specific target level (SSTL)** — risk-based remedial action target level for chemical(s) of concern developed for a particular site under the Tier 2 evaluation.

**Source(s)** — the underground storage tank(s) and piping and any product contained therein. (May also be referred to as the primary source.)

**Source area(s)** — either the location of liquid hydrocarbons or the location of highest soil and ground water concentrations of the chemical(s) of concern. (May also be referred to as the secondary source.)

**Storm water or wastewater collection system** - piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.

**Substantial business relationship** - the extent of a business relationship necessary under the applicable laws of the District of Columbia to make a guarantee contract issued incident to that relationship both valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from and depends on existing economic transactions between the guarantor and the owner or operator.

**Subtitle** – the District of Columbia Underground Storage Tank Regulations found in 20 DCMR Chapters 55 through 70.

**Surface impoundment** - a natural topographic depression, man-made excavation, or dike area formed primarily of earthen materials (although it may be lined with man-made materials) that is not an injection well.

**Tangible net worth** - the tangible assets that remain after deducting all liabilities. These assets do not include intangibles, such as goodwill and rights to patents or royalties. For purposes of this paragraph, "assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity as a result of past transactions.

**Tank** - a stationary device designed to contain an accumulation of regulated substances that is constructed of non-earthen materials (such as concrete, steel, or plastic) that provide structural support and containment.

**Target levels** — numeric values or other performance criteria that are protective of human health, safety, and the environment.

**Termination** - under §§6707.1, 6707.2 and 6707.3 means only those changes that could result in a gap in coverage as where the insured has not obtained substitute coverage or has obtained substitute coverage with a different retroactive date from the retroactive date of the original policy.

**Tier 0 evaluation** — an analysis of levels of chemicals of concern based upon a comparison of test results from soil and water samples to the District of Columbia's standards for concentrations of TPH, BTEX, and benzene in soil.

**Tier 1 evaluation** — a risk-based analysis to develop non-site-specific values for direct and indirect exposure pathways utilizing conservative exposure factors and fate and transport for potential pathways and various property use categories (for example, residential, commercial, and industrial uses). The Water Quality Standards for Groundwater set forth in 21 DCMR Chapter 11 and values established under Tier 1 will apply to all sites that fall into a particular category.

**Tier 2 evaluation** — a risk-based analysis applying the direct exposure values established under a Tier 1 evaluation at the point(s) of exposure developed for a specific site and development of values for potential indirect exposure pathways at the point(s) of exposure based on site-specific conditions.

**Underground area** - an underground room, such as a basement, cellar, shaft, or vault, that provides enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor.

**Underground release** - any release below the surface of the ground.

**Underground storage tank or UST** - in accordance with §2 of the Act, any one tank or combination of tanks (including any underground pipes) that is used to contain an accumulation of regulated substances and the volume of which (including the volume of underground pipes connected thereto) is ten percent (10%) or more beneath the surface of the ground. As used in these regulations the term does not include any underground storage tanks which are exempt pursuant to §5501.3 of Chapter 55.

**Upgrade** - the addition or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of a regulated substance.

**UST Division** – the District of Columbia Underground Storage Tank Division.

**UST system or tank system -** an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.

**Voluntary remediating party** — a person, who is not a responsible party, who undertakes a corrective action at a LUST site or facility.

**Voluntary remediation** — a corrective action performed by a non-responsible party.

**Wastewater treatment tank** - a tank that is designed to receive and treat an influent waste water through physical, chemical, or biological methods.